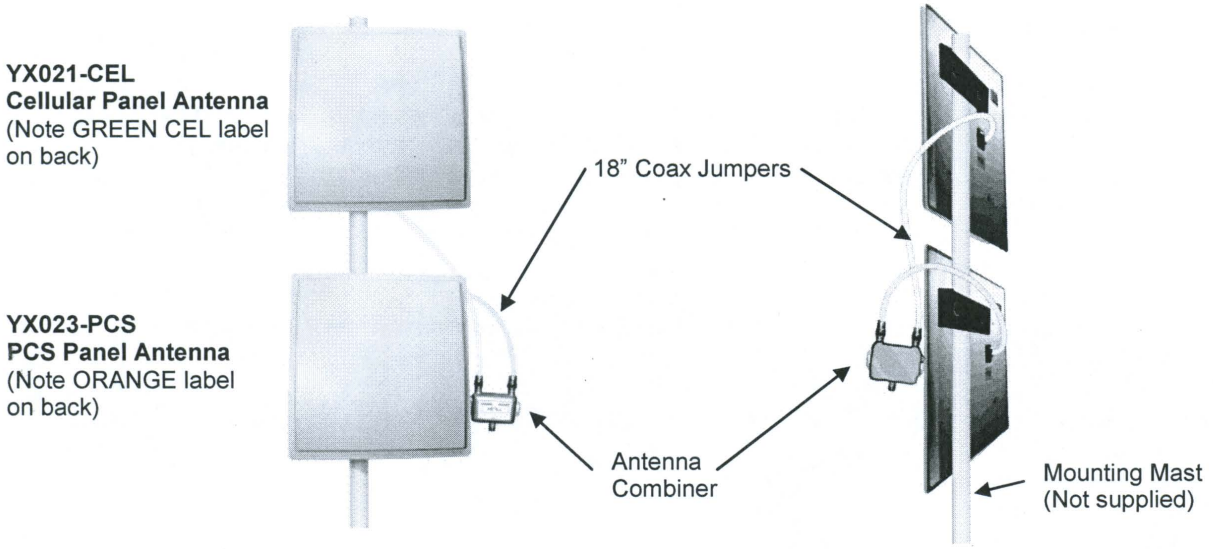
Wi-Ex

Extending Cell Zones

YX039-PCS-CEL Dual-Band Signal Antenna Installation Guide

The YX039-PCS-CEL dual-band outdoor signal antenna system allows your Wi-Ex cell phone signal booster to provide a larger area of improved indoor signal strength and improve indoor performance where weak outdoor cell signals exist. The antenna operates with signals in both the 850 MHz Cellular and the 1900 MHz PCS bands.

The YX039-PCS-CEL dual-band antenna system consists of two directional panel antennas, one for the Cellular band (850 MHz) and one for the PCS band (1900 MHz). An antenna combiner is included to combine the signals from the two antennas into one coax for connection to the Wi-Ex Base Unit. Two 18" coaxial jumpers are included to connect the each panel antenna to the Combiner.



YX039-PCS-CEL Front View **YX039-PCS-CEL Rear View**

Maximum performance will be achieved when the antennas are aimed at the strongest signal from your wireless provider. If you know the direction of your provider's tower, simply point the antenna in that direction. Note: the closest tower may NOT be used by your provider. Some helpful hints are included if you are unsure where your tower is located.

Installation Steps:

1. The highest mounting point will usually produce the best results. If you do not have roof access, you should choose the side of the building with the strongest signal. With your wireless phone turned on, walk around your house while noting the number of "bars" on your signal strength indicator.
2. When you have determined the location of the strongest signal, attach the antennas to a mast or pole with the brackets provided as shown in the picture above. Loosely tighten the antennas to the mast to allow the antennas to be reoriented for strongest signal.
3. Connect the coax jumper from the YX021-CEL panel antenna to the connection on the Combiner marked CEL.
4. Connect the coax jumper from the YX023-PCS panel antenna to the other Combiner port marked PCS.

5. Connect the RG-6 coax from the Base Unit to the Combiner output port, route coax to the Base Unit indoors and connect the other end of the coax to the Base Unit.

Antenna Aiming:
To get the maximum benefit, you will want to take special care to make sure you point the antennas in the direction of the best signal for your wireless service provider. To aim each antenna for maximum signal, you may need more than one cell phone, one operating in the Cellular band (typically Cingular, Verizon or Alltel) and one operating in the PCS band (typically Sprint, T-Mobile, Metro PCS, Cricket).

1. Using the phone operating in the Cellular band, place the cell phone on a non-metal surface about 6-8 feet from the Base Unit.
2. Turn the signal booster on and wait 30 seconds. Note the number of signal bars displayed on your cell phone. For best results, you want to place your phone where the phone's signal meter displays in the middle of the signal meter range or less so that it can indicate as you rotate the Signal Antenna to the optimum direction. If it is reading too high, move the phone farther from the base unit antenna.
3. Record the number of signal bars _____(A) on your cell phone. Leave the phone in exactly the same place and pointing in the same direction for the following steps.
   Note the direction of the Yagi antenna starting position_____.
4. Rotate the YX021-CEL panel antenna 90 degrees and then record the phone signal bars _____(B). ***NOTE: The flat front face of the antenna should point toward the desired signal location.***
5. Continue to rotate the antenna mast another 90 degrees in the same direction and record the phone signal bars _____(C).
6. Again, rotate the antenna mast another 90 degrees in the same direction and again record the phone signal bars _____(D).
7. If you desire to optimize further, then look for the two highest signal bar readings above and move the antenna between these two points to find the highest signal bars reading.
8. Look for the highest reading above. Set the antenna to that position and tighten the antenna to the mast.
9. With a PCS cell phone, repeat steps 1 through 8 rotating the YX023-PCS panel antenna for maximum signal strength as indicated on the PCS cell phone.
10. Once you have determined the highest reading position for each phone, tighten the antennas securely to the mast. ***Note: In most situations, both panel antennas will be oriented in the same direction.***

You have now completed the Directional Signal Antenna installation and you now have "Wireless Where You Want It."

Troubleshooting:

- If you have difficulty peaking each antenna, you may not be using the cell phone for the correct band (Cellular or PCS). Try the other cell phone and repeat the steps for that antenna to see if there is a change in signal strength indicated on the cell phone.
- If you get a red light on the Base Unit, you are experiencing reduced performance and may need to improve your installation. Consult the Wi-Ex Users Guide for more information on setup.
- Please consult your Wireless Extenders Cell Phone Signal Booster installation guide for more complete troubleshooting information.

For the **latest installation tips and drawings**, visit our website at www.wi-ex.com and click on the Installation button and the FAQ's button (Frequently Asked Questions).

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YX023 Signal Antenna Installation

Congratulations! This high-powered, high-gain directional antenna will allow your Wireless Extender to operate at the maximum legal limit of output power as allowed by Federal Communications Commision (FCC) law. It typically works best when it is aimed at the strongest signal from your wireless provider. If you know the direction of your provider's tower, simply point the antenna in that direction. Note: the closest tower may NOT be used by your provider. We have included some helpful hints if you are unsure where your tower is located.

Installation Steps:

1. The highest point will usually produce the best results. If you do not have roof access, you should choose the side of the building with the strongest signal. With your wireless phone turned on, walk around your house while noting the number of "bars" on your signal strength indicator.
2. When you have determined the location of the strongest signal, install and tighten the antenna to your antenna mast or pole with the brackets provided. Loosely tighten the mast, so that you can rotate it from the base.
3. Connect the provided cable to the antenna.
4. Wrap the F- type connector "female end" on the three foot cable using the Coax-Seal tape following the instructions on the package.
5. Connect the other end of the short cable to the cable that is provided in your Wireless Extenders Cell Phone Signal Booster kit. YOU MUST USE BOTH CABLES TO MEET FCC REQUIREMENTS. (Alternately, you may use a single Wireless Extenders cable if it is 50 feet or longer.)
6. Route this antenna cable indoors and connect it to the base unit using the Cell Phone Signal Booster installation instructions.

Antenna Aiming:

To get the maximum benefit, you will want to take special care to make sure you point the antenna in the direction of the best signal for your wireless service provider.

1. Place your cell phone on a non-metal surface which is 6-8 feet from the Base Unit Antenna.
2. Turn the signal booster on and wait 30 seconds. Note the number of signal bars displayed on your cell phone. For best results, you want your phone to display in the middle of the signal meter range or less so that it can go up as you rotate the Signal Antenna to the optimum direction. If it is reading too high, move the phone farther from the base unit antenna.
3. Record the number of signal bars (or range) _____(A) on your cell phone. Leave the phone in the same place and pointing in the same direction for the following steps. Note the direction of the antenna starting position_____.
4. Rotate the antenna mast 90 degrees and then record the phone signal bars _____(B).

5. Continue to rotate the antenna mast another 90 degrees in the same direction and record the phone signal bars _____(C).
6. Again, rotate the antenna mast another 90 degrees in the same direction and again record the phone signal bars _____(D).
7. Look for the highest reading above. Set the antenna to that position and tighten the antenna mast.
8. If you desire to optimize further, then look for the two highest signal bar readings above and move the antenna between these two points to find the highest signal bars reading.
9. Once you have determined the highest reading position tighten the antenna mast.

You have now completed the Directional Signal Antenna installation and you now have "Wireless Where You Want It."

Troubleshooting:

- "Network Overdrive" [Power LED = off; Signal LED = Solid Red; Install LED = Solid Red] -you will have to choose another direction to aim your Directional Signal Antenna. This usually means that you are getting too much signal from another service provider.
- "Oscillation" [Power LED = off; Signal LED = Flashing Red; Install LED = Flashing Red] -you will have to choose another direction to aim your Directional Signal Antenna OR move your Base Unit Antenna. This usually means that your Directional Signal Antenna is pointing towards the Base Unit Antenna.
- Please consult your Wireless Extenders Cell Phone Signal Booster installation guide for more complete troubleshooting information.

For the **latest installation tips and drawings**, visit our website at WirelessExtenders.com and click on the Installation button and the FAQ's button (Frequently Asked Questions).

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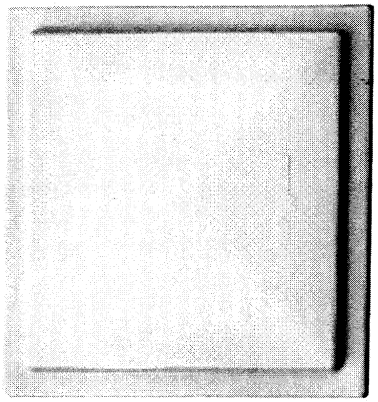
YX021-CEL Signal Antenna Installation

The YX021-CEL is a high gain, directional panel antenna for use with the Wi-Ex zBoost YX500 and YX600 Series amplifiers to provide maximum signal strength and increase the area of improved signal coverage



Maximum performance will be achieved when the antenna is aimed at the strongest signal from your wireless provider. If you know the direction of your provider's tower, point the flat front face of the antenna in that direction. Note: the closest tower may NOT be used by your provider. Some helpful hints are included if you are unsure where your tower is located.

Note: Unplug the Base Unit until all cables are connected. Plug-in the Base Unit and verify that the Power light stays green and no red indicators light; otherwise, you may have to reorient the antenna or relocate to another location in the room. See the Troubleshooting section and www-wi-ex.com for more information.

Installation Steps:

1. The highest point will usually produce the best results. If you do not have roof access, you should choose the side of the building with the strongest signal. With your wireless phone turned on, walk around your house while noting the number of "bars" on your signal strength indicator.
2. When you have determined the location of the strongest signal, install and tighten the antenna to your antenna mast or pole with the brackets provided. Loosely tighten the mast, so that you can rotate it from the base.
3. Place the Heat Shrink tubing over the coax and connect the RG-6 coax cable to the antenna.
4. Wrap the F- type connector using the Coax-Seal tape provided in the package.
5. Slide the Heat Shrink tubing over the connectors and apply heat to shrink the tubing to weatherproof the connection. A hair dryer or other heat source may be used to shrink the tubing.
6. Route the antenna cable indoors and connect it to the base unit using the Cell Phone Signal Booster installation instructions.

Antenna Aiming:
To get the maximum benefit, you will want to take special care to make sure you point the antenna in the direction of the best signal for your wireless service provider.

1. Place your cell phone on a non-metal surface which is 6-8 feet from the Base Unit Antenna.
2. Turn the signal booster on and wait 30 seconds. Note the number of signal bars displayed on your cell phone. For best results, you want your phone to display in the middle of the signal meter range or less so that it can go up as you rotate the Signal Antenna to the optimum direction. If it is reading too high, move the phone farther from the base unit antenna.
3. Record the number of signal bars (or range) _____(A) on your cell phone. Leave the phone in the same place and pointing in the same direction for the following steps.
   Note the direction of the antenna starting position_____.
4. Rotate the antenna mast 90 degrees and then record the phone signal bars _____(B).
5. Continue to rotate the antenna mast another 90 degrees in the same direction and record the phone signal bars _____(C).
6. Again, rotate the antenna mast another 90 degrees in the same direction and again record the phone signal bars _____(D).
7. Look for the highest reading above. Set the antenna to that position and tighten the antenna mast.
8. If you desire to optimize further, then look for the two highest signal bar readings above and move the antenna between these two points to find the highest signal bars reading.
9. Once you have determined the highest reading position tighten the antenna mast.

You have now completed the Directional Signal Antenna installation.

Troubleshooting:

- Please consult your Wi-Ex Cell Phone Signal Booster installation guide for more complete troubleshooting information.

For the **latest installation tips and drawings**, visit our website at www.wi-ex.com and click on the Installation button and the FAQ's button (Frequently Asked Questions).

Specifications:

Frequency Range	824-896 MHz
Gain	8 dBi
VSWR	<1.5
Impedance:	75 ohms
Polarization	Vertical
Dimension	10.75"L x10.0"W x 2.25"H
Weight	1.55 lbs
Connector	Type F-female